

REMARKS/ARGUMENTS

Claim 22 has been amended as recommended by the Office Action to overcome the 35 U.S.C. Section 101 rejection. Applicant appreciates the recommendation.

The preambles of the independent claims have been amended to overcome the rejection under 35 U.S.C. Section 112, 2nd paragraph.

Regarding the 35 U.S.C. Section 112, 1st paragraph rejection due to non-enablement, the Office Action states that the “Cisco MetroPlanner™ is not for defining a recommended route at the time of operation of a digital network”. Office Action at page 3. Applicant agrees that the Cisco MetroPlanner™ and various other planning tools available at or about the time of filing the present application were not used “for defining a recommended route at the time of operation of a digital network.” Rather, Applicant’s specification teaches how to use traditional planning tools such as the Cisco MetroPlanner™ to “define a recommended route” and then “allocating the recommended route at the time of operation of the digital network.”

The specification clearly teaches one of ordinary skill in the art how to make and use the claimed invention without undue experimentation. By way of illustration, a copy of “Cisco MetroPlanner DWDM Operations Guide, Software Release 2.5, October 2004 (the most relevant documentation available to the undersigned at this time)” is included in an Information Disclosure Statement provided with this Response. Page 1-9 of the document indicates types of routing strategies that can be used to generate recommended routes. This function was well-known to network planners at the time of filing the present application in order to design network traffic routes at a planning stage.

Regarding the 35 U.S.C. Section 103 rejections, claims 1, 21, 22 and 24 are the remaining independent claims. Each of these claims includes a limitation not disclosed by or made obvious in view of the prior art. For example, each independent claim recites “using a network planning tool prior to a time of operation of the digital network to define a recommended route.” Next, “determining when a route change is needed at a time of operation of the digital network”. And finally, allocating the recommended route at the time of operation of the digital network” (emphasis added).

Blouin does not disclose any use of a planning tool or network planning information. Blouin is concerned only with analysis of routes at a time of operation of the network in order to allocate a new route. “[T]he method enables the network to autonomously adapt to time-varying traffic and network-state. The steps in the method are based on multi-timescale measurements in the network to offer real-time resource allocation and provide long-term provisioning requirements.” Blouin at col. 2, lines 26-31. Such an approach teaches away from the present invention which uses a network planning tool to determine a recommended route for use in a route change “at the time of operation of the digital network.”

Note that Blouin does not even mention a planning tool or a planning stage of a network design. This is to be expected from the prior art where routing selection has been sharply divided into either planning or operation stages. Thus, it is not a showing of “obviousness” to merely identify one reference that deals with planning stage routing and another that deals with real-time, or operation stage routing. There are many such independent references in the prior art and their existence apart from each other reinforces the non-obviousness of combining them, particularly in view of the unexpected benefits that can be achieved, some of which are described in the specification as follows:

[06] The planning tools tend to use more sophisticated routing algorithms than operational control software. The planning tools also benefit from knowing upfront future traffic details that allow design of a more efficient overall network. Today’s operational control systems often lack detailed optical engineering characteristics and are inadequate to handle reconfigurable optical networks. For example, operational controls may fail to determine when optical impairments necessitate regeneration of a signal along an optical path.

[20] . . . This allows processes at the operation stage to take advantage of sophisticated simulation results from planning tools to determine problems such as when an optical impairment requires

regeneration of a signal along an optical path. Other advantages can be realized.

[23] . . . Thus, with information provided from the planning stage, the operation processes can be instructed to allocate one of the two paths of Fig. 3B when a new connection route is desired. This allows the network to be configured for maximum volume rather than shortest path. A decision can be made by the NOC or by a node process to allocate according to volume or speed at the time that allocation is requested. Many such network optimization advantages and other advantages can be obtained. Figs. 3A and 3B are but one type of simplified example.

Applicant respectfully submits that the present claims are in condition for allowance and an early Notice of Allowance is earnestly sought. The undersigned may be contacted at the telephone number below at the Examiner's convenience if it would help in the prosecution of this matter.

Respectfully submitted,

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